Macomb Township

C

Water Connection

Water Quality Report 2006

Published April 2007

Department of Water and Sewer

51650 Card Road, Macomb, MI 48042 Business (586) 598-0687 Emergency (586) 598-1790

David Koss, Superintendent

Gerry Wangelin, Asst. Superintendent



Public Participation

The Macomb Township Board of Trustees conducts regularly scheduled business meetings on the second and fourth Wednesday of each month. These meetings allow the general public an opportunity to address significant concerns to the Board.



The Board of Trustees oversees the operations of the Water and Sewer Department. These meetings in particular do not discuss water quality but will address all purchases, functional activities and concerns that may arise. The office of the Water & Sewer Department welcomes your comments and opinions about this report and will be happy to answer any questions you may have by contacting our department representatives at (586) 598-0687, Monday thru Friday from 8:30 am to 5:00 pm or the website at waterandsewer@macombmi.gov

Before You Dig, Call Miss Dig

Three full working days before you dig, call the MISS DIG System at

1-(800)-482-7171



or call #DIG

free from your AT&T or Cingular cellular phone.

Macomb Township and other MISS DIG member utilities will mark the approximate location of their underground public utility lines at no charge.

Macomb Township Board of Trustees

John D. Brennan Supervisor

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Nancy J. Nevers

Family Corner

Matching Water Use

Match the items on the left to the amount of water they use on the right.



B. 180 gallons

1. Taking a shower	 A 30 gallons
2. Watering the lawn	B 180 gallor

3. Washing the dishes C. 4-7 gallons

4. Washing clothes D. 1/2 gallon

5. Flushing the toilet E. 39,090 gallons

6. Brushing teeth F. 62,600 gallons

7. Drinking G. 15-30 gallons

8. Needed to produce one ton of steel H. 9.3 gallons

9. Needed to process one I. 1 gallon can of fruit or vegetables

J. 9-20 gallons 10. Needed to manufacture

a new car and its four tires

Word Scramble

١.	All things need		to live
	0	(rawet)	

2.	You can save water by taking a		shower!
		(uqcki)	

3.	Remember to turn off the	when brushing you		teeth	
		(aucfet)			

4.	One percent of the world's		water is	available t	o drink
	Explicit Applications .	(rhsef)			

5.	We		water	in the	liquid	form
		(riknd)	_			

6. Always check for leaks or drips to save hundreds of		0
water a day.	(llagnso)	

7. Wash bikes and cars with a		and sponge	instead	of a
running garden hose.	(bkuetc)			

8.	Water your	lawn in	the	evening	or in	the	early	morning	to	avoid
(V	paertoinoa)									

Substances That Might Be in Drinking Water

In order to ensure that tap water is safe to drink, The Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring miner-

More information about contaminants and potential health effects can be obtained by calling the *Environmental Protection Agency's Safe Drinking Water Hotline at (1-800-426-4791).*

als and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Substances that may be in source include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural live-stock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- ☐ Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- □ Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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Water Analysis for 2006

Detected Contaminants Definitions

MCLG — (Maximum Contaminant Level Goal) - The level of contaminant in drinking water below which there is no known or expected risk to health.

MCL — (Maximum Contaminant Level)- The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MRDLG — (Maximum Residual Disinfectant Level Goal) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MRDL — (**Maximum Residual Disinfectant Level**)- The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

ppb — (Parts per billion (one in one billion) - The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.

ppm — (Parts per million (one in one million) - The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.

NTU — (Nephelometric Turbidity Units)- Measures the cloudiness of water.

TT — (Treatment Technique) - A required process intended to reduce the level of a contaminant in drinking water.

AL — (Action Level) - The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.

HAA5 — (Haloacetic acids) - HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.

TTHM — (**Total Trihalomethanes**) - Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.

n/a — (Not applicable)

> — (Greater than)



State and Federal laws require Macomb Township and the City of Detroit to routinely monitor for contaminants in your drinking water. We are providing you with the results of the contaminants that were detected in our water. The tables below and on the next page denotes the monitoring period from January 1, through

Contaminant	Test Date	Units	Heal Goa MCL	al	Allowed Level MCL	Leve Detec	V. V.	Range of Detection	Violation yes/no	Major Sources in Drinking Water	
Inorganic Chemicals – Annual Monitoring at Plant Finished Water Tap											
Fluoride	8/15/2006	ppm	4		4	0.997		n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.	
Nitrate	8/15/2006	ppm	10		10 0.217		n/a	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits		
Disinfectant Re	siduals and	Disinfec	tion By-	Produ	icts - N	lonitoring	in D	istribution S	ystem		
Total Trihalomethanes (TTHM)	Feb-Nov 2006	ppb	n/a		80	14.9		7.5-25.1	No	By-product of drinking water chlorination	
Haloacetic Acids (HAA5)	Feb- Nov 2006	ppb	n/a		60	10.1		5.4-17.1	No	By-product of drinking water disinfection	
Disinfectant (Total Chlorine residual)	Jan-Dec 2006	ppm	MRDG 4	L	MRDL 4	0.66		0.53-0.76	No	Water additive used to control microbes	
Radioactive Co	ntaminants-l	Plant Fir	ished V	Vater	Тар						
Alpha Emmitters	11/16/2001	pCi/I	0	15	3	3.19	n/a		No	Erosion of Natural Deposits	

2006 Turbidity – Monitored every 4 hours at Plant Finished Water Tap								
Highest Single Measurement Cannot exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation yes/no	Major Sources in Drinking Water					
0.11 NTU 100%		No	Soil Runoff					

2006 Microbiological Contaminants – Monthly Monitoring in Distribution System								
Contaminant	Contaminant MCLG MCL		Highest Number Detected	Violation yes/no	Major Sources in Drinking Water			
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	in one month 1	no	Naturally present in the environment.			
E.coli or fecal coliform bacteria	are total coliform positive and one is		entire year	no	Human waste and animal fecal waste.			

Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90 th Per- centile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2005	ppb	0	15	0	0	no	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2005	ppm	1.3	1.3	.080	0	no	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.

*The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL additional requirements must be met.

Regulated Contaminant	Treatment Technique	Running annual average	Monthly Ratio Range	Violation Yes/No	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each month and because the level was low, there is no requirement for TOC removal.				Erosion of natural de- posits

2006 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.01	Erosion of natural deposits

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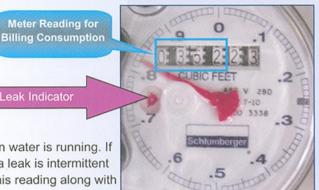
Water Conservation. Use Your Meter

Reading this meter: Since we bill by units (100 cubic feet) of water, the last two numbers on the far right hand side of the register are not read for billing. This meter reads 0352 for billing purposes. Unfortunately, not all meters are the same -- the sweep hand (the RED pointed hand) measures tenths of a cubic foot. One revolution of the red pointed hand equates to one cubic foot or 7.48 gallons of water.

Leak detection dial: Most residential meters have a leak detection dial.

Shown is the RED TRIANGLE dial just left of center. It may spin rapidly when water is running. If water is dripping, the leak detection dial may creep or turn ever so slowly. If a leak is intermittent as may happen with toilet leaks, the detection dial may be still. Write down this reading along with the date. Take a second reading later and subtract the first reading from the second reading. This

will give you the total water usage over the period between the readings. Example, reading 0352 to 0367 equates to 15 units or 11,250 gals.

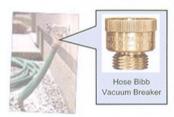


No Need for Second Meters

Macomb Township does not provide a second meter for outdoor water use. Instead, a homeowner is billed (based on consumption) up to a maximum of 40 units of sewer on a quarterly water bill. The costs associated with a second meter will take approximately 20 years to recoup verses the methodology of the 40 unit system. For example, a resident is billed 100 units. The bill will reflect a charge of 40 units of sewer and 100 units of water. This formula has saved residents money and reduced the need of a second meter. If you have any questions, please contact the Department for further information.



Cross Connections, Protect Our Drinking Water



A cross connection is a direct or potential arrangement of drinking water piping that is or can be connected to boilers, air conditioning systems, fire sprinkler systems and irrigation systems or water systems of guestionable guality. Its true, you may be polluting your own drinking water without even realizing it. There are two causes for contamination, back-pressure and back-siphonage. Outside water faucets and garden hoses are the most popular sources of cross connections in the home. Garden hoses are most commonly left submerged in swimming pools, water ponds and connected to garden sprayers for weed and insect killing. Your outside faucets are required to be protected by a Hose Bibb Vacuum Breaker and anti-siphon vacuum breaker for lawn sprinkler systems. Protect our water system.

Meter Reading for

Leak Indicator

Leaks Are Costly

There are many ways to conserve water. You should watch for leaks in your home system. These leaks can add as much as a dollar per day and hundreds of dollars per year to your water bill. Leaky faucets, faulty toilets, over watering of lawns and faulty water activated sump

pumps are some examples of fixtures that can produce exorbitant bills. If you think you have a leak in your home, you should find the leak as quickly as possible and contact a plumbing agency to have the leak repaired. Macomb Township cannot adjust your water bill for water that was wasted by unfortunate water leaks. Knowing how to read your water meter is important. This will tell you exactly the amount of water you use.

Is It Safe to Drink Water from a Garden Hose?

No.... Substances used in vinyl garden hoses to keep them flexible can get into the water as is passes through the hose. These chemicals are not good for you, nor are they good for your pets. Allow the water to run for a short time in order to flush the hose before drinking or filling your pets drinking containers. Hoses made with food-grade plastics will not contaminate the water. Consult your local hardware.



Health Information On The Water You Drink



"Some people may be more vulnerable to contaminants in drinking water than is the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the "Safe Drinking Water Hotline (1-800-426-4791)."

A Message from Superintendent David Koss

Macomb Township is honored to provide you the 2006 Annual Water Quality Report known as the "Water Connection". This report reviews the sources of our water, lists the results of our tests, and contains important information about water, health and ways to conserve water. Unfortunately, water and sewer rates are increasing every year; we have also provided information to assist you with household money saving ideas. Macomb Township is pleased to show you we have surpassed water quality standards as mandated by the Environmental Protection Agency (EPA) and the State of Michigan Department of Environmental Quality (MDEQ) for the 2006 calendar year. Please visit our website at www.macomb-mi.gov/pages/water and sewer.htm for additional information.

Water Distribution System

Macomb Township Water & Sewer Department provides drinking water to approximately 23,500 metered customers in the 36 square mile area. The systems water is drawn from three master meters. Two along 24 Mile Road, the third in the 21 Mile and Fairchild Road area. The water traversing through the master meters is supplied and purchased from the City of Detroit, otherwise known as DWSD. For informational purposes throughout this report, the water supplied to Macomb Township from DWSD is from the Lake Huron Treatment Plant. Macomb Township Water & Sewer Department operates and maintains the water distribution system with approximately 21 professionally certified employees. Weekly bacteriological samples are collected throughout the distribution system and delivered to a certified laboratory at DWSD. Macomb Township Water & Sewer Department will notify you immediately if there is ever any reason for concern about our water.

Additional information visit: Macomb Township website at www.macomb-mi.gov.

Our Primary Source of Water, Lake Huron Treatment Plant

Macomb Township is supplied by the Detroit Water System where the water is produced by the Lake Huron Water Treatment Plant near Port Huron. From this point, the water travels through large mains to a point where it enters Macomb Township. Your source water comes from the lower Lake Huron watershed. The watershed includes numerous short, seasonal streams that drain to Lake Huron. The Michigan

Department of Environmental Quality in partnership with the U.S. Geological Survey, the Detroit Water and Sewerage Department, and the Michigan Public Health Institute performed a source water assessment to determine the susceptibility of potential contamination. The susceptibility rating is on a six-tiered scale from very low to high based primarily on geologic sensitivity, water chemistry, and contaminant sources. The Lake Huron source water intake is categorized as having a moderately low susceptibility to potential contaminant sources. The Lake Huron water treatment plant has historically provided satisfactory treatment of this source water to meet drinking water standards.

If you would like to know more about this report please visit the Detroit Water and Sewerage Department's website at www.dwsd.org or contact Mary Lynn Semegen, (313) 935-7106, semegen@dwsd.org.

Facts

The Lake Huron Water Treatment Plant began full-scale operation in 1974. The plant is located in Port Huron Michigan and is the most recent addition to the Detroit Water Distribution System. The plant has a current pumping capacity of 400 million gallons per day.

Mission Statement

Macomb Township Water & Sewer Department is dedicated to the Health, Safety and Welfare of the Community. Our goal is to meet and exceed all Federal, State and Local Requirements in providing the highest quality of drinking water, fire protection flows and the most efficient sewage disposal system.

Water Restrictions, Memorial Day Through Labor Day

In the summer months, municipal water usage doubles. This is the season when people are outdoors watering lawns and gardens, filling swimming pools and washing cars. Summer peak demand places stress on municipal water systems and increases costs for water users. As water supplies diminish during periods of low rainfall, some municipalities must declare restrictions on lawn and garden watering.

Macomb Township has implemented a voluntary odd/even lawn watering restriction, effective *Memorial Day* through *Labor Day*. Water customers with an address ending in an odd number are to water on odd calendar days and those with an address ending in an even number are to water on even calendar days. In addition, we ask you to refrain from any outside water use between the hours of 6:00 am - 9:00 am and 6:00 pm - 9:00 pm. This will ensure adequate water pressure for potable use and fire protection. If conditions warrant, DWSD in conjunction with Macomb Township will impose mandatory water restrictions. Macomb Township monitors system pressures 24 hours a day, 7 days a week in order to maintain a safe water system. Strict enforcement is required to keep our operating pressures safe.

Cleaner Safer Environment, We Can All Pitch In !!!

Remember, you're not just walking the dog Some important tips for keeping our water clean

Did you know that pet waste contains bacteria that makes our lakes and rivers unsafe for swimming and other recreational activities?



Did you know?

- ..There are over 53 million dogs in the United States, which produce 6.3 billion pounds of waste and bacteria per year?
- ..Residential lawns and streets are among the highest contributors of bacteria in storm water, which drains directly to our lakes and rivers?

Southeast Michigan loves dogs, too. Nearly one-third of the region's households have at least one dog. Most of us pick up after our pets to be good neighbors and keep our yards clean. But there's another important reason to clean up after our pets. Leaving pet waste on the sidewalk or in the yard means that harmful bacteria can get washed into storm drains and roadside ditches and then flow directly into our lakes and rivers untreated.

What can you do? Simple. No matter where you are, dispose of your pet's waste promptly by throwing it in the trash or toilet.

For more easy steps on protecting our lakes and rivers, visit the "Ours to Protect" site at www.semcog.org or www.macomb-mi.gov/pages/water and sewer.htm and visit the storm water links.

Household Hazardous Waste Guide

Cleaning products like aerosols, bathroom cleaners and drain cleaners, and car supplies like waxes, starting fluids and repair products are all considered household hazardous wastes. Many ingredients in these products are corrosive or reactive, and if they aren't disposed of properly, they can harm people and the environment. Chemicals in them can actually contaminate our rivers, lakes and drinking water.





Tips for handling toxics

- Store household hazardous wastes in their original containers, and make sure the labels are readable.
- Save money and reduce waste by purchasing only what you need and use.
- Let solvents and paint thinners set in a closed jar to let dirt and paint settle to the bottom. You can reuse the top portion, and dispose of less waste!



Hazardous Waste Accepted by Macomb County Health Department:

Automotive Products				
used motor oil and filters	☐ battery acid	gasoline	□ brake fluid	transmission fluid
cleaners, waxes, polishes Lawn/Garden Products	□ antifreeze			
□ pesticides	☐ fertilizers	weed killers	poisons	
Household Products				
□ oven cleaner	☐ drain cleaner	☐ rat/ant poison	degreasers	household batteries
☐ non-narcotic medications	solvents	nail polish & remover	oil based paint	muriatic acid
☐ photographic chemicals	Coleman lighter fluid	unused aerosols	pool chemicals	☐ fluorescent tubes
products containing mercury				

For more information on collection times and locations please visit the Macomb County Health Department website at: http://macombcountymi.gov/PUBLICHEALTH/EH/HouseholdWaste.htm or call (586) 469-5236.

Macomb Township Department of Water & Sewer 54111 Broughton Road Macomb Township, MI 48042 (586) 598-0687

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